

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-47 (Cancelled).

Claim 48 (New): An isolated monoclonal antibody that binds to a human cell surface receptor 4-1BB polypeptide consisting of SEQ ID NO:8, wherein the monoclonal antibody binds to endogenous human 4-1BB cell surface receptor on activated primary T-cells, the alloreactive CD4⁺ T-cell clone PL-1, EBV transformed B cell lines, the pro-monocytic cell line U937, and resting and activated peripheral blood monocytes.

Claim 49 (New): The monoclonal antibody according to claim 48, which is an IgG1 isotype.

Claim 50 (New): The monoclonal antibody according to claim 48, which has been raised against human 4-1BB/F_c fusion protein.

Claim 51 (New): The monoclonal antibody according to claim 50, wherein the human cell surface receptor 4-1BB polypeptide consists of amino acids 1-163 of SEQ ID NO:8.

Claim 52 (New): The monoclonal antibody according to claim 48, which is an antagonistic monoclonal antibody.

Claim 53 (New): The monoclonal antibody according to claim 48, which is an agonistic monoclonal antibody.

Claim 54 (New): The monoclonal antibody according to claim 51, which is an antagonistic monoclonal antibody.

Claim 55 (New): The monoclonal antibody according to claim 51, which is an agonistic monoclonal antibody.

Claim 56 (New): An isolated monoclonal antibody that binds to a human cell surface receptor 4-1BB polypeptide consisting of SEQ ID NO:8, wherein the monoclonal antibody binds to endogenous human 4-1BB cell surface receptor on activated primary T-cells.

Claim 57 (New): An isolated monoclonal antibody that binds to a human cell surface receptor 4-1BB polypeptide consisting of SEQ ID NO:8, wherein the monoclonal antibody binds to endogenous human 4-1BB cell surface receptor on the alloreactive CD4⁺ T-cell clone PL-1.

Claim 58 (New): An isolated monoclonal antibody that binds to a human cell surface receptor 4-1BB polypeptide consisting of SEQ ID NO:8, wherein the monoclonal antibody binds to endogenous human 4-1BB cell surface receptor on EBV transformed B cell lines.

Claim 59 (New): An isolated monoclonal antibody that binds to a human cell surface receptor 4-1BB polypeptide consisting of SEQ ID NO:8, wherein the monoclonal antibody binds to endogenous human 4-1BB cell surface receptor on the pro-monocytic cell line U937.

Claim 60 (New): An isolated monoclonal antibody that binds to a human cell surface receptor 4-1BB polypeptide consisting of SEQ ID NO:8, wherein the monoclonal antibody binds to endogenous human 4-1BB cell surface receptor on resting and activated peripheral blood monocytes.

Claim 61 (New): A hybridoma capable of producing the monoclonal antibody of claim 48.

Claim 62 (New): A hybridoma capable of producing the monoclonal antibody of claim 51.

Claim 63 (New): A hybridoma capable of producing the monoclonal antibody of claim 52.

Claim 64 (New): A hybridoma capable of producing the monoclonal antibody of claim 53.

Claim 65 (New): A hybridoma capable of producing the monoclonal antibody of claim 54.

Claim 66 (New): A hybridoma capable of producing the monoclonal antibody of claim 55.

Claim 67 (New): An isolated agonistic monoclonal antibody, which binds to human 4-1BB (H4-1BB) having SEQ ID NO:8.

Claim 68 (New): An isolated antagonistic monoclonal antibody, which binds to human 4-1BB (H4-1BB) having SEQ ID NO:8.

Claim 69 (New): The antibody of claim 67, which binds to T cells.

Claim 70 (New): The antibody of claim 68, which binds to T cells.

Claim 71 (New): The antibody of claim 67, which is of the IgG isotype.

Claim 72 (New): The antibody of claim 68, which is of the IgG isotype.

Claim 73 (New): A hybridoma capable of producing the antibody of claim 67.

Claim 74 (New): A hybridoma capable of producing the antibody of claim 68.

Claim 75 (New): A monoclonal antibody against 4-1BB which specifically recognizes an epitope on the extracellular domain of receptor protein 4-1BB.

Claim 76 (New): A hybridoma capable of producing the monoclonal antibody of claim 70.